Message (Digitally Signed)

From: Hamilton, John (IHS/PHX) [John.Hamilton@ihs.gov]
Sent: 12/2/2014 3:10:25 PM
To: Rapicavoli, Emmanuelle [Rapicavoli.Emmanuelle@epa.gov]
Subject: Preliminary Comments - DWTSA Proposals
Attachments: smime.p7s

OK, thanks. This week, I work Tuesday – Thursday. I'll send you and other project officers my monthly schedule this week.

John

From: Rapicavoli, Emmanuelle [mailto:Rapicavoli.Emmanuelle@epa.gov]
Sent: Monday, December 01, 2014 6:48 PM
To: Hamilton, John (IHS/PHX)
Subject: RE: Preliminary Comments - DWTSA Proposals

Thanks John. We have our ranking meeting on Wednesday and I give you an update later in the week or next on projects we'd like a more detailed review.

Thanks,

Emmanuelle

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From: Hamilton, John (IHS/PHX) [mailto:John.Hamilton@ihs.gov]
Sent: Friday, November 28, 2014 1:51 PM
To: Rapicavoli, Emmanuelle; Banks, Karl; Lee, Bessie; McKinley, Helen; Andrew, Sallach; Gambatese, Jason
Subject: Preliminary Comments - DWTSA Proposals

Emmanuelle,

Here are my preliminary comments on the DWTSA proposals for fiscal year 2015. As we discussed, I can provide more detailed comments in December for projects that may be in or near the funding range. Please contact me if you have any questions.

DWTSA 15 -	Comments
1	**Big Valley Rancheria** $515,300 project to construct a new water treatment plant, and close the current plant, which is co-located in a building with the Tribe's wastewater treatment plant. • This project was ranked by the Tribe as health category 2, although that may be speculative, since there has been no identified cross connections or other contamination resulting from the location.

	• The treatment process includes iron and manganese removal with green sand filters and perhaps hydrogen sulfide removal? The Fe/Mn levels may be high for this type treatment? Pilot testing is proposed. • How is O&M cost of $480,000/year affordable, considering there are only 38 tribal homes? Does a casino pay the majority of these costs? If the casino or other commercial users are big water users, perhaps they should cost share?
2	**Campo South** $458,511 project to address increasing uranium levels, which had been just under the MCL and may now be at or above? Average level for three samples in 2014 = about 20 mg/l. Last year this was proposed as an "E", but uncertain about if it could be a 7c? • The south water system has 15 connections and a user pop=40, with an 8 gpm well and 103K gallon WST. A PER or feasibility study has not yet been completed. Drilling a backup well is apparently planned, although a FS is needed to consider alternatives. • There was no cost estimate, although last year this project totaled $411K.
3	**Campo Old System** $479,000 project to replace the existing 55,000 gallon water storage tank. • PER was completed in 2012, and updated by IHS in 2014. Average daily demand=19,400 gpd for 80 users is 242 gpcd. Water conservation may be a good first step? The existing tank provides 2.8 days average storage, but may be marginal for peak demands. While the tank may be undersized, this project seems to be primarily for fire flows. • There have been 4 water outages over the past three years, including one from a power outage, one from a vehicle breaking a PRV and one from filling a swimming pool. • A 60,000 gallon tank is proposed at a cost of $449,000, which is high for this capacity tank, although Campo is located in a high seismic risk area. Would a total storage tank volume of 115,000 gallons result in stagnation for a service pop=80? • This proposal is ranked an "E" by Campo and it may be an "8" under the new health categories? The project may be reasonable to fund from USDA Rural Development program?
4	**Fallon** $200,000 for water loss mitigation and conservation study. • Many years ago, the Tribe negotiated about 18 water use agreements in exchange for rights-of-way for a water transmission line passing through non-Indian land between the Colony and Reservation. This 5.5 mile line carries water treated in the arsenic treatment plant, which is expensive to operate. • The Tribe feels that significant water is lost, potentially through unmetered and perhaps unauthorized connections on the non-Indian land, through water main or service line leaks and perhaps through excessive use both on reservation and off. While $200K is requested, the proposal does not include a budget, scope of work or schedule.
5	**Hoopa** $371,000 proposal to install ozone disinfection to address cyanotoxins resulting from blue-green algae being drawn in through the buried infiltration gallery under the Trinity River. • Is there any firm evidence this is an ongoing problem and there are health effects? • The PER does not indicate where the ozone would be injected at the surface water plant nor does it explain the efficacy of injection with respect to the algae and it's apparent toxin. It would be advisable to pilot test any recommended treatment for this contaminant, although this may be impossible because the algae is not normally present in the river or in the influent. Does the preliminary design cost of $50,000 include pilot studies? • What is the industry standard for addressing the suspected contaminant? Does the consulting firm selected for the planning and design have experience with this treatment process?
6	**Hopi Moenkopi** $699,000 Category 8 project to drill wells as part of a water supply study, although the project would equip the well(s) and place in service. • This system serves about 300 connections, population of 1000, plus a hotel, Denny's and travel center (commercial usage = 24% of total). While there were no water outages during 2014, there have been several in recent years. • Three old wells, which provide about 2/3 of the water for this community, are old, poorly constructed and unreliable. Meeting current demand by pumping 24 hr/day and can't meet peak demand. • USGS has proposed a study, which includes drilling and equipping two new wells, although the cost estimate completes just one new well? • Housing authority and development corporation plan 60 apartments, 24 houses and 10 mobile homes, so perhaps the Hopi Housing Authority should pay a large portion of the cost of this project? The development corporation, MDC has been paying most of the operating costs of both the water and wastewater systems for the last couple of years.
7	**Hopi HAMP** $16,914,000 represents the balance of HAMP funds needed. Last year EPA funded a $985,000 project and have funded about $5 million to date.

	• The above funding represents the unfunded portion of the project, which would include completing all three phases of this project. Likely funding agencies remain USDA as the major funding agency with both loan and grant funds, HUD, IHS and EPA, along with a strong likelihood of participation by the Tribe ($2 million offered, but not yet committed) and BIA. • The well drilling contract is completed, with excellent quality water, arsenic < 5 ppb and yields over 325 gpm per well. • The PER, Strategic Plan and EA have been completed, although IHS has not approved the FONSI, pending acceptance of pipeline alignments and the project in general by the 4 village traditional leaders. • The enforcement compliance date of January 23, 2015 looms and the Tribal Council needs to take action to move forward on this project.
8	**La Posta** $258,000 to factory repaint a ten year-old bolted steel water storage tank, 200K gallon capacity for just 17 connections and a user population of 47. • This tank is either significantly oversized or water consumption is high? If water use is 100 gpcd, the tank would provide 42 days of storage! • While the tribe rated this as category "E" last year, it may be a 9E? • The Upper and Lower water systems are now interconnected, through an EPA Tribal Border project grant. • Since this tank is just 10 years old, is repainting considered a local responsibility? Another consideration is the use of bolted steel tanks in seismically active areas. Perhaps welded steel should be used in the future, since painting is needed in just 10 years?
9a	**Los Coyotes** $200,000 to replace two below-ground PRV vaults with above ground PRVs and modify masonry tank connection includes with an air-gap to preclude backflow and resulting contamination. The proposed project is rated in the health category 4 by the Band. • The vaults are frequently flooded and may pose a threat of bacterial contamination of the distribution system. • The need for an air gap for the masonry tank fill pipeline seems clear. • The two active PRV vaults are reported to be "frequently flooded" from leaks in the plumbing or from groundwater intrusion after rain events. The PER mentions that the drains for these PRV vaults may need attention. It seems unlikely that this desert area would have high groundwater. • The need for the project seems reasonable, but there has been only one reported positive bacti. sample in September 2011, and the source of this may be contamination from sampling, or the fact the spring source is presently untreated, or other contamination unrelated to the PRV vaults such as connection to the old stone and mortar water storage tank. • IHS just funded a regular project, in the amount of $271,000 to construct a slow sand filtration system for the spring, which will include disinfection with solar power.
9b	**Los Coyotes** $58,000 for abandoning old (circa 1970) 3" and 4" PVC water mains water mains and reconnecting three houses to the newer water main. This project would be rated in health category 9D. Would it be possible to simply valve-off the old portion of the water main, since it parallels a newer water main. If that is possible, then the project would need just the three service line connections, at considerably less cost.
9c	**Los Coyotes** $21,000 for fencing around the circa 2001 bolted steel water storage tank, ranked as health category 9E by the Band. The proposed fencing is good from a security standpoint, but if the masonry tank is also online, it too should be fenced.
10	**Morongo** $348,050 project to clean non-food grade oil from three wells and two water storage tanks. Health category 9D. • The PER was prepared by a consulting firm and IHS does not seem to be involved. The problem resulted from using petroleum based oil for years in turbine pumps, resulting in contamination of three wells and the two tanks. Morongo switched to food grade oil in 2012. • There is a claim that the drought may cause the oil that floats in the three wells and in the tank could be drawn into the distribution system? • There are no water use figures provided, but it seems likely the casino is a big water consumer and perhaps the total cost should be shared? • There is no detailed cost estimate, or quotes from contractors, but the project cost includes $50,000 for cleaning three wells and $200,000 for cleaning and repainting tank interior. It may be possible to clean the tanks, without blasting and repainting the interiors? On the other hand, it may be time for interior recoating, but that may be a local operation and maintenance cost? The brief PER states that "NEPA or CEQA is not required", but if EPA awards a direct grant to the Tribe, some NEPA evaluation would be required, although it may be a simple CATEX?
11	**Navajo Rock Point** This $4.2 million project includes a request for $2.2 million from EPA and the balance would be funded by the Navajo Nation. This project would include 34 miles of 2" and 4" diameter

	water main extensions to serve 62 new residential connections. It also includes a booster station, 38K gallon water storage tank, and appurtenances. • Water may be hauled from contaminated, unregulated watering point wells with uranium levels above the MCL. Are there other wells that can be used, which meet the SDWA? • The Rock Point public water system has two existing wells, with a combined capacity of 145 gpm. Is the water quality in this system suitable and in compliance with the SDWA? • In past proposals, a SDWA compliant watering point, with card reader was considered as an alternative. • IHS would provide plumbing and septic systems for these new water service connections, although this is not part of the project or cost estimate? Have soil conditions been assessed to determine if septic systems are feasible for all 62 houses? • Costs are very reasonable as usual with NECA construction, including about $14/LF for 4" diameter PVC water main, with rock excavation. It seems unlikely that all 34 miles of water main would require rock excavation? Why is the archaeological clearance $75,750, while endangered species surveys and clearance is just $3500?
12	**Pauma** $347,300 to replace an 110,000 gallon, leaking, bolted steel water storage tank that may have been damaged in a recent earthquake. • The tank was built in 1995, and it could either be replaced or repainted. Note the system also includes a 518,200 gallon bolted steel tank that has major corrosion on the exterior. • A major water user for this system is the tribe's casino. Since the January 2014 sanitary survey indicates both tanks are "targeted for rehabilitation", due to rust and/or leaks, perhaps EPA would want to work with the tribe to cost share? With only 67 homes and a population of about 250, commercial water use must be significant. Is the residential water usage known?
13	**San Carlos** $624,000 would be matched with $1,677,000 of funding from four ongoing arsenic mitigation projects at San Carlos to move to a new area to drill two wells, after completing a hydrogeological study and report. That study will be underway shortly, based on a proposal from USGS and using the available funds. • The proposed $2.3 million project also includes 7500 LF of connecting 12" water main, and a 250,000 gallon water storage tank. • The health category of 6B seems reasonable based on the known issues with arsenic. • EPA had funded previous arsenic projects, and the planned area for drilling wells with adequate yields and lower arsenic levels has had mixed results at best. It may be advisable to delay funding for this project until after the test well drilling is completed, depending on other EPA DWTSA needs and priorities? • The PER is very well researched and written, although there is much uncertainty in my mind about whether the proposed new well field, which would include two new wells in the Bush area, will have adequate quantity and better quality water. The plan is to move outside the alluvium of the San Carlos River, which seems to be the problem area for arsenic. While the existing Bush well has an arsenic level ranging from 3-8 ppb, it has a yield of 40 gpm. • IHS and the Tribe hope to develop 300 gpm wells in this area, but this may be very optimistic? • While several well logs were included in the PER, the critical log for the Bush well was not? Also, with more pumping, the arsenic level could increase? Are there other contaminants, such as iron, manganese or other issues? The new high school well, in the same area has arsenic in the range of 1-3 ppb. • The other big issue is the very high per capita water use in this community. Perhaps it's time for EPA to condition the proposed grant with required and completed water conservation measures, such as billing based on metered usage, low flow fixtures, etc.
14a	**Smith River Intertie** $96,000 for an intertie between the tribal water system and the local water district for emergency purposes only. • An earlier EPA project provided funds to upgrade the Lopez creek infiltration gallery and shallow well near the Creek. Even with these measures, flows are down and the community has experienced water shortages. • They made a temporary above ground connection to the water district, and would now like to install a permanent buried pipeline for this purpose. The line would be just 140 LF, and would require a backflow preventer. • Would there be any problems with completing an agreement between the Tribe and water district? Also the County would need to issue an encroachment permit for the pipeline.
14b	**Smith River** This proposal includes preparation of a PER to investigate water source alternatives at a cost of $30,000. • There may not be any good alternative supplies, such as wells or surface water, but the Tribe could connect to the local water district, which is in the same community.

	• The above project would make an emergency connection to this system, but it could be a long-term permanent solution if the system has sufficient water supplies and is willing to sell water to the tribe, and if the tribe is willing to forgo the independence they now have. Would user rates be higher with this connection?
15	**Tohono O'odham Sells** $1,363,290 for construction of a 2 mile extension of a previously EPA funded project. • Previous EPA funding = $1,671,000 and IHS = $671,000 to replace 32 year-old 12' diameter, fiberglass transmission line pipe, which is being used in a diminished manner, by limiting flow to 390 gpm to keep pressure down (to 165 psi) and reduce line breaks. The total pipe length is 5.5 miles. • Total well (4 ea.) capacity = 1870 gpm and booster station capacity approx. 2200 gpm, depending on pipe diameter and pressure. • The history of lines breaks, which is 9 breaks in the past 11 years is not too bad, but it has resulted in limiting supply to this community of over 4000. • Unit costs seem high, as 18" diameter C-905 pipe is $83/ft installed, plus contingencies = 5%. Since EPA and IHS funded part of this project in 2014, have any contracts been awarded for pipeline work and if so, what was the bid price for this pipe?
16	**Tohono O'odham Charco** $593,000 for construction completion of a PER and related planning for a nitrate mitigation project, including approximately $400,000 for test drilling a 10" diameter 1500 foot well. • There is only one well on line for this community of 80 people and 20 connections, since the second well exceeded the nitrate MCL. The well in service has nitrate = 8.9 mg/l. • The planning project would cost about $115,000 for engineering and related technical services. Tribal water resources has recommended a test well location. Is there power in the area? The well would be considered for a regional system, which would be one of the alternatives. Is arsenic also a problem in this area? • The proposal includes a schedule to complete the well and engineering within 20 months, which is reasonable, if there are no environmental or land issues.
17	**Torres Martinez** $1,610,000 project to connect the Avenue 64 subdivision to the CVWD regional water system, as a result of elevated levels of perchlorate and chromium. • The perchlorate level of 6.9 ppb exceeds the CA standard, although the SDWA does not yet have a standard. • The Tribe rated the project in health category 9B. • This small system, with 33 houses seems to suffer from a lack of O&M. • USDA has apparently agreed to fund a sewer extension to CVWD, and the water connection would follow the same alignment and could be built concurrently.
18a	**Yurok Wautec Intake** $432,8000 project to upgrade the surface water intake to reduce water loss under drought conditions, and replace a 4435 LF 2" diameter galvanized transmission line built 48 years ago. • Improvements would be made to the road leading from the WTP to the small dam and intake to allow monitoring of the transmission line and cleaning the intake. The surface water treatment plant is operating satisfactorily, but the 4525 LF distribution system would be replaced, due to age and surface damage. • An IHS funded project will upgrade a roughing filter that has been out of service. • This is a very remote community, without power, so the fact that the water system has remained functional is notable.
18b	**Yurok Wautec Water Connections** $200,000 health category 6 project to extend the Wautec water system to a nearby Jack Norton school and 3 homes that get arsenic laden water from another creek. This would require a booster pump, so electrical service must be nearby? • Is the School District planning on funding and building the line to the school?

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